



Assistive Technology Continuum of Low to High Tech Tools

Boston Public Schools **Access Technology Center (ATC)**

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ATC Web Sites

BPS Public Web Site:

[*www.boston.k12.ma.us*](http://www.boston.k12.ma.us)

- Teaching and Learning
- Technology
- Access Technology Center

MyBPS Web Site:

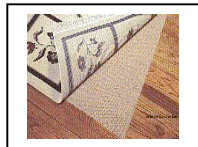
[*www.mybps.org*](http://www.mybps.org)

- Teaching and Learning
- OIIT Technology
- Instructional Technology
- Access Technology Center

Assistive Technology Continuum: Examples of Low to High Tech Tools

LOW TECH

Motor/Mechanics of Writing



Binder – use as a slant board; hold in place with rug lock

Rubber stamps – letters, numbers, math functions facilitate simple tasks, e.g., writing name on paper

< **Rug lock** – stabilizes work/writing surface

Koosh ball – sensory input, kinesthetic, stress reliever, identifies speaker in group

< **Pencil grips** – various types



Grip It! – a holder for pens that attaches to desk, computer, etc.

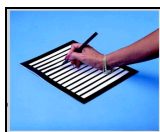
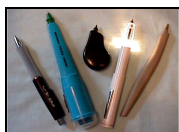
Tactile rulers – some school rulers have raised numbers/lines with notches for locating points on the ruler or make your own with puff paints

< **Evo pen** – oval pen that fits in the palm of the hand

< **eGrip, Dr. Grip pens** - rubber grip in middle

< **Light Pen** – enhances writing area

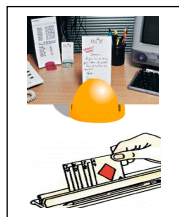
< **Plastic signature guide and writing guide** – (ILA) guides the writer's hand; keeps within lines; also use to frame text as read \$3.49 writing guide; \$2.50 signature guide



< **Raised line paper** (Therapro, Onion Mountain Tech) – primary or elementary – Red/Green paper indicates Start/Stop points

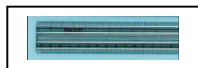
LOW TECH

Motor/Writing & Reading Supports



White board – easier for some students to use (some are magnetic as well)

< **Page holders** (TOP) Page Up (MTM - Minstrel Trading & Marketing, Corp., Onion Mountain Tech) each/minimum purchase of 5, small footprint but holds large papers), and (BOTTOM) acrylic cardholders (Maddak, Inc./Ableware® - purchase at ILS -Independent Living Aids, \$5.95); also look for clear picture holders (office supply) - to hold story pages, schedules, directions, vocabulary words, math tables, etc.; place in page holder on desk for continuous access; student can manipulate cards to create sentences, number problems, etc. if writing is difficult



< **Finger grip ruler** (Westcott, office supply, \$1) – for students with fine motor difficulties; allows ruler to be grasped by raised center grip bar; also use for focusing on words/lines while reading

Magnetic sheets/business cards – can be cut as needed to create numbers, letters, words, sentence strips; put on cookie sheet, metal ruler/yardstick (use also as visual/reading supports)

Magnetic picture frames – all sizes; to hold pictures/words



Velcro (AliMed offers discounts to schools) – attach letters, words, sentences, etc. on ruler/yardstick or garden gloves/mittens for interactive lessons

< **Velcro enhanced books** – copy or cut out graphics from books; attach velcro to picture and book for interactive lessons; purchase commercially made Velcro books, e.g., Interactive Stories (Mayer-Johnson, \$19.00)



Velcro story pouch bag - front and back



< **Velcro/soft fabric** –(Fabrics & Fasteners, self-adhesive also; fabric stores) - use Velcro or other soft fabric to create bulletin boards, fabric boards/books, gloves/mittens, etc. for interactive word/number play with Velcro backed symbols/props (Discount School Supply for gloves/mittens, when available; Storytelling Book Tote; Storytelling Set)



< **Inquiry Box** (make it yourself) - Access Tech has developed a fun, inexpensive, interactive, multi-purpose teaching/learning tool for the classroom using a cardboard mailing carton. The box has plastic page protectors/pockets on all 6 sides, allowing you to address a wide variety of content areas by inserting pictures, words, numbers, etc., inside the pockets to be used in a variety of creative ways. The Inquiry Box handout provides directions for making the box and strategies for its use.

Visual/Reading Supports

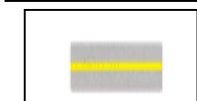


Easy reading text guides: Use plastic signature guide or Finger Grip Ruler or regular ruler
< **Bar Magnifier w/ yellow guiding line** (ILA) - 6" is \$3.95 & 9" is \$4.95

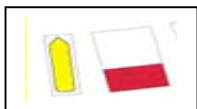


Other Magnifiers - sheets, bars, hemi-sphere styles; many bars have a yellow highlighter section down the middle to emphasize words/phrases in text

Correction tape – removable; write on it and erase it; can be removed without damaging paper/text



< **Highlighter tape** (Lee Products - Crystal Springs Books) - removable; same as correction tape but comes in many colors; emphasize words/phrases in text; laminate to make a student reading guide that highlights/focuses in on text; \$1.25/roll (Use for motoric challenges too)



< **Reading Helper** (Onion Mountain Tech; Crystal Springs Books) - white plastic strip with highlighting down the middle; multiple colors and sizes the middle to help students track text as they read, 10 for \$13.95

Laminate highlighter tape to make your own reading guide

< **Page Flags** – removable; use to emphasize words/text, etc.



< **See It Right or other colored transparencies** (See It Right!) – use to correct specific visual perceptual problems; student chooses preferred color to place over book/text

Enlarge text on photocopier - can place in card holder on desk

Jumbo rulers (educational supply) – enlarged numbers/lines



< **Word rings** – create your own from index cards, can laminate; or purchase pre-made packages (Top Notch Teacher/school supply) - words, words & definitions, words & pictures, etc.

Words in a bottle – put laminated words in a plastic bottle for easy access

Transparent pencil cases – with holes for a notebook or hanging style (like travel bath cases); holds letter or word cards



Corner Rounding Punch (Bidex Precision Cutting, at office/craft stores) - clips off sharp edges on laminated cards, etc. for improved appearance and safety



Avery Removable Label Paper, 8.5" X 11" (Office Supply, AVE-6465/ 25 pack, \$15-\$20) - Full page removable labels for use on AAC devices, notebooks, adapting books, etc. Print BoardMaker symbols to adapt a book and peel off later, keeping the book intact.

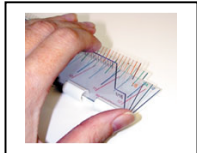


Binder Clips (Office Supply) – use to clip student work onto hangars for classroom display; come in a variety of sizes



< **Sentence Strips & Objects/Symbols** - on Velcro/soft pouch board; store words/sentences, etc. inside the pouch (Augmentative Resources)

Math Supports



< **The Master Ruler** - (Master Innovations, Inc., \$6.95) Ruler has 5 separate transparent layers, each measuring a different fraction of an inch shown in a unique color for easy identification. Use for measurement skills, fractions, addition and subtraction of mixed numbers and improper fractions, and multiplication and division of fractions. All layers of the teacher's ruler are clear for overhead presentations.



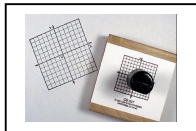
< **The Master Fraction** (Master Innovations, Inc., \$5.95, Starter Set \$22.95) - Transparent overlays demonstrate the concepts of equivalency, reducing, improper and proper fractions, adding, subtracting common and uncommon denominators, mixed numbers, and more covering the fractions: $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{16}$, $\frac{1}{3}$, $\frac{1}{6}$, $\frac{1}{12}$, $\frac{1}{5}$, $\frac{1}{10}$, $\frac{1}{20}$.



The Master Angle (Master Innovations, Inc., \$3.00) - Circular disk showing 360 degrees with moveable lines to form angles

The Master Clock (Master Innovations, \$9.95) - transparent layers & removeable gears

< **Fractionograms** (Onion Mountain Technology) - set of two stamps demonstrate parts and their relationship to the whole (\$13.95)



< **X-Y Stamp** (Onion Mountain Technology) - Creates a negative and positive X-Y axis (\$4.00)

Large 1" grid chart paper (office supply) - promotes visual access; laminate for reuse

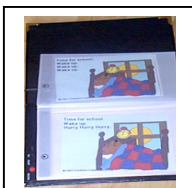
MID TECH (battery powered)



< **Time Timer** (Generation) – visual depiction of elapsed time; 3", 8" and 12" sizes; students see a visual depiction of time remaining for a task in red as the clock counts down



< **Speaking Homework Wiz** (Franklin Electronic Publishers) – promote reading support for student independence; HomeWork Wiz (\$24.95) & Talking Homework Wiz (\$49.95) for primary & early elementary; Merriman Webster Dictionary & Thesaurus (\$59.95) or the Speaking version (\$79.95) for upper elementary to high



< **Talking Photo Album** (Onion Mountain Tech; sometimes available at discount stores, e.g., Joanne's Fabrics) – Places pictures/story pages in the plastic sleeves and record up to 24 pages of speech (\$29 for photo album, \$45 for album with idea book; can also be found sometimes at large discount stores))



< **Neo (AlphaSmart, Inc.)** portable keyboard – simple word processor; connects directly to computer/printer to transfer text; software applets available for Inspiration, KeyWords keyboarding program & Co:Writer word prediction software.

HIGH TECH



< **Loc Dots** – raised plastic dots that are used to tactually identify keys on a keyboard or objects, e.g., house keys



< **Key Guard** – clear lucite keyboard cover with holes cut out; facilitates selection of keys



< **Zoomcaps** – (Meeting the Challenge or Don Johnston) - enlarged individual stick-on key overlays make finding keys easier



< **Big Keys** – one of several alternative large letter, abc order keyboards for young children or students with motor or cognitive challenges difficulties



< **Touch Window** – (Edmark) touch sensitive screen that goes over the monitor



< **Alternative Keyboard, e.g., IntelliKeys Keyboard** (IntelliTools, Inc.) - use as keyboard without with software or with IntelliTools Software Suite (IntelliTalk III talking word processor/authoring tool; IntelliPics Studio multimedia tool; IntelliMathics manipulative math program; activities available online to download)

SOFTWARE:



Accessibility features built into Mac/PC - control panels address a range of disability issues

Visual/Reading Support Tools:

< **BoardMaker** – Picture Communication Symbols software; create stories with text/symbols; picture dictionaries, supplement text with symbols, substitute text with symbols, create communication boards, etc.



< **Inspiration/Kidspiration** (Inspiration) – graphic organizer software

Slide Shows – Kid Pix, ClarisWorks/AppleWorks, Power Point

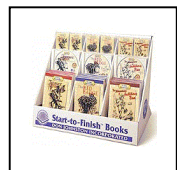
Earobics (Cognitive Concepts) – auditory discrimination software

Simon Sounds it Out (Don Johnston) – phonics-based program using word families

Beginning Phonics Reading (Lexia) – based on Orton Gillingham

Reading SOS Strategies for Older Students (Lexia) - based on Orton Gillingham

< **Electronic books, e.g., Start-to-Finish Books (Don Johnston)** - high interest/low reading level sets; 2nd-3rd or 4th-5th reading grade levels; book, audiotape & CD that highlights text & reads it aloud to student



Text-to-Speech: Shareware, e.g., **Tex-Edit** (Mac) & freeware, e.g., **Read Please** (PC); some Some commercial word processors have text-to-speech features, e.g., **IntelliTalk III** (IntelliTools) and **Write Out:LOUD** (Don Johnston) - read text aloud & highlight words as spoken

Text readers - e.g., Kurzweil 3000 (Kurzweil Educational Systems), Read & Write Gold (TextHelp) - read all text files, e.g., from the web, scanned, etc.

Word prediction that works with any word processor - e.g., **Co:Writer** - anticipates what the student wants to say and provides a list of words to choose from

Electronic text (etext) – text files found online, scanned, etc., to use with text readers

Online Virtual Manipulatives: <http://boston.k12.ma.us/teach/technology/select/> The Select Math site provides links (paired with middle school standards) to online manipulatives. There are many more manipulatives for all levels at the linked sites, e.g., Project Interactivate, NCTM, PBS Teacherline, & Explore Learning.

Resources:

Please note: The following list describes products that, for the most part, are currently in use in Boston Public Schools classrooms. The Boston Public Schools does not make any endorsement, recommendation or warranty as to any specific product listed here.

- **A.D.D. Warehouse**

Phone: 800-233-9273
www.addwarehouse.com

- **AliMed**

Phone: 800-225-2610
www.alimed.com

- **Augmentative Communication, Inc.**

Phone: 831-649-3050
www.augcominc.com

- **Crystal Springs Books**

Phone: 800-321-0401
www.crystalsprings.com

- **ABC Stuff: Resources for Reading**

Phone: 800-278-7323
www.abcstuff.com/

- **CAST Center for Applied Special Technology**

Phone: 781-245-2212
www.CAST.org
CAST eReader

- **Discount School Supply**

www.discountschoolsupply.com
800-836-9515

- **Don Johnston Incorporated**

Phone: 847-740-0749
www.donjohnston.com
Range of AT products

- **Fabrics & Fasteners (formerly P & A Sales)**

Phone: 888-696-1020
Veltex fabric (self-adhesive type also available, Velcro)

- **Franklin Electronic Publishers**

Phone: 800-525-9673
www.franklin.com
Hand-held dictionary/spellers, etc

- **Generaction**

Phone: 877-771-8463
www.TimeTimer.com
Time Timer elapsed time clock

- **J. L. Hammett, Co.**

Phone: 800-955-2200
www.hammett.com
Educational Supply

- **Independent Living Aids, Inc. (ILA)**

Phone: 800-537-2118
www.independentliving.com/frame_magnifier.htm
Range of magnifiers & other talking, tactile devices, etc.

- **Inspiration Software, Inc.**

Phone: 503-297-3004
www.inspiration.com
Inspiration/Kidspiration

- **IntelliTools, Inc.**

Phone: 707-773-2000
www.intellitools.com
Adaptive tools and software.

- **Kurzweil Educational Systems**

Phone: 899-894-5374
www.kurzweiledu.com
Kurzweil 3000 & Kurzweil 1000

- **LynJan Solutions, Inc.**

Phone: 269-424-6520
www.lynjan.com

- **Master Innovations, Inc.**

Phone: 908-859-1788
www.themasterruler.com

- **Mayer-Johnson, Inc.**

Phone: 800-588-4548
www.mayer-johnson.com
Tools & software for language development

- **Meeting the Challenge, Inc.**

Phone: 719-444-0252
www.mtc-inc.com

- **Minstrel Trading & Marketing, Corp. (MTM)**

Phone: 305-165-0186
menes@sprynet.com.

- **New England Office Supply**

Phone: 800-345-7080, X297 Tim Osborn, BPS Rep.
BPS staff get 35% off all orders

- **Onion Mountain Technology**

Phone: 860-693-2683
<http://www.onionmountaintech.com/catalog.pdf>
Wide range of low and mid tech tools available for purchase

- **See It Right!**

Phone: 909-481-2950
<http://www.seeitright.com/>
Colored acetate filters & training to support students with visual perceptual problems.

- **TextHELP!® Systems Ltd.**

Email: info@texthelp.com www.texthelp.com
Text readers and word prediction software